

Title (en)  
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Publication  
**EP 3745519 A4 20210324 (EN)**

Application  
**EP 18902210 A 20181212**

Priority  

- JP 2018011526 A 20180126
- JP 2018011527 A 20180126
- JP 2018173450 A 20180918
- JP 2018045585 W 20181212

Abstract (en)  
[origin: EP3745519A1] Provided is a battery in which the internal resistance is further decreased. The present disclosure provides a battery, comprising a positive electrode, a negative electrode, and an electrolyte layer provided between the positive electrode and the negative electrode. The electrolyte layer includes a first solid electrolyte material. The first solid electrolyte material includes Li, M, and X, and does not include sulfur. M is at least one selected from the group consisting of metalloid elements and metal elements other than Li. X is at least one selected from the group consisting of Cl, Br, and I. The negative electrode includes a negative electrode active material and a sulfide solid electrolyte.

IPC 8 full level  
**H01M 10/0562** (2010.01); **C01B 25/14** (2006.01); **C01F 17/00** (2020.01); **C01G 25/04** (2006.01); **H01M 4/133** (2010.01); **H01M 4/587** (2010.01); **H01M 4/62** (2006.01); **H01M 10/052** (2010.01); **H01M 10/0525** (2010.01); **H01M 4/02** (2006.01)

CPC (source: EP US)  
**C01F 17/36** (2020.01 - EP); **C01G 25/006** (2013.01 - EP); **H01M 4/133** (2013.01 - EP US); **H01M 4/587** (2013.01 - EP US); **H01M 4/62** (2013.01 - EP US); **H01M 10/052** (2013.01 - US); **H01M 10/0525** (2013.01 - EP); **H01M 10/0562** (2013.01 - EP US); **H01M 50/431** (2021.01 - US); **H01M 50/449** (2021.01 - US); **H01M 50/46** (2021.01 - US); **C01B 25/14** (2013.01 - EP); **H01M 2004/027** (2013.01 - EP US); **H01M 2004/028** (2013.01 - US); **H01M 2300/0068** (2013.01 - EP); **H01M 2300/008** (2013.01 - EP US); **H01M 2300/0091** (2013.01 - EP); **H01M 2300/0094** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP)

Citation (search report)  

- [A] ANDREAS BOHNSACK ET AL: "Ternary Halides of the A3 MX 6 Type. VI. Ternary Chlorides of the Rare- Earth Elements with Lithium , Li", JOURNAL OF INORGANIC AND GENERAL CHEMISTRY, vol. 623, 1 July 1997 (1997-07-01), pages 1067 - 1073, XP055600040, DOI: 10.1002/chin.199739018
- [A] JOHANN AMBROSIUS BARTH ET AL: "Ternary Halides of the A3 MX 6Type. VII. The Bromides Li<sub>3</sub>MBr<sub>6</sub>(M=Sm-Lu, Y): Synthesis", CRYSTAL STRUCTURE, JOURNAL OF INORGANIC AND GENERAL CHEMISTRY, vol. 623, 1 September 1997 (1997-09-01), pages 1352 - 1356, XP055600030, DOI: 10.1002/zaac.19976230905
- See also references of WO 2019146293A1

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AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3745519 A1 20201202; EP 3745519 A4 20210324; EP 3745519 B1 20221102; CN 111566864 A 20200821; CN 111566864 B 20240322; JP 7249562 B2 20230331; JP WO2019146293 A1 20210128; US 11631853 B2 20230418; US 2020350625 A1 20201105; WO 2019146293 A1 20190801**

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**EP 18902210 A 20181212; CN 201880085630 A 20181212; JP 2018045585 W 20181212; JP 2019567903 A 20181212; US 202016931092 A 20200716**